

Distribution of toxic algae and water quality in the reservoir of Mae Kuang Udomtara Dam in Chiang Mai province were carried out during April 1999 to September 2000. It was found to be contaminated by toxic algae i.e. *Microcystis aeruginosa* Kütz, *Cylindrospermopsis raciborskii* (Wolosz.) Seenayya & Subba, which showed in higher number than other species. *Anabaena aphanizomenoides* Forti, *Anabaena catenula* (Kg.) Born. et Flah., *M. wesenbergii* Komárek, *Oscillatoria vizagapatensis* C.B. Rao, and *Phormidium tenue* (Menegh) Gom.

M. aeruginosa was found in high amount at water surface in 2 periods, during April to July 1999 and July to August 2000. Whilst another six species of toxic algae were also found in different amount. For microcystins analysis, microcystin-RR was found in higher amount whilst microcystin-LR and -YR were also found in small amount, the highest level of microcystins found in water was 0.15 ng.L^{-1} , was lower than those determined by World Health Organization for the standard of raw water using for water supplies. Distribution of algal cells and microcystins at different water levels were also investigated. The algal cells stayed mainly at the water surface whereas the amount of each toxin did not depend on the water depth. Factors which trended to be correlated with the blooming of *M. aeruginosa* were water volume, temperature, light intensity and ammonium nitrogen

The water quality of all reservoirs was in oligotrophic- mesotrophic status. Based on the standard surface water quality, it was classified to be in the second to third category and was relatively clean for water supplies when treated properly.